

CARCO® SERVICE BULLETIN

Bulletin LIT2006
Jan. 2001

SERVICING HYDRAULIC ACCUMULATORS

MODELS EFFECTED: **CARCO Power Shift** winch models **30, 50, 50A, 70, 60, 80, 120**

This bulletin replaces Service Bulletin 90, dated August 1989.

The models listed above utilize a steel-cased accumulator containing a rubber bladder filled with compressed nitrogen gas. In service, the accumulator stores oil at system pressure to aid in brake release and clutch application. The accumulator also stores enough oil for the operator to release the winch brake in the event of a stalled tractor PTO or engine failure.

REPLACEMENT ACCUMULATORS

Replacement accumulators are shipped **without** any pre-charge.

BEFORE installing a new replacement accumulator, it **MUST** be charged to 190-210 PSI (13.4 – 14.8 kg/cm²) with dry nitrogen. Do not use any other gas or compressed air.

Charging Procedure

1. Remove the accumulator service cap. Inspect the valve core to ensure it is properly tightened to 3-4 lb•in (0.4 – 0.5 kg•m) torque.
2. Install the test/charge gauge assembly and charge the accumulator to the pressure defined above.
Note: In order to properly service (1) pint (30 in³) capacity accumulators, a charging adapter (Greer – A Division of Parker Hannifin - P/N 603738) will be required.
3. Once properly charged, reinstall the service cap and tighten to 18-20 lb•in (2.5 – 2.8 kg•m).

⚠ CAUTION ⚠

Remove any shipping and warning labels from new accumulators **BEFORE** installing them. Warm oil may dissolve label adhesive and allow labels to restrict oil flow at the suction strainer, or cause damage to seals and bearings.

If you have any questions regarding this service bulletin or your CARCO winch, please contact PACCAR Winch Product Support.

Monday-Friday, 0800 hrs – 1630 hrs CST

PHONE: (918) 251-8511

FAX: 1-918-259-1575

EMAIL: winch.service@paccar.com

PACCAR WINCH DIVISION

P. O. BOX 547 BROKEN ARROW, OK U.S.A. 74013
PHONE (918) 251-8511 FAX (918) 259-1575
www.paccarwinch.com

SERVICING EXISTING ACCUMULATORS

The nitrogen pre-charge pressure for hydraulic accumulators used on the listed CARCO Power Shift winch models has been increased to 190-210 PSI (13.4 – 14.8 km/cm²), beginning with winch S/N 8903954. This pressure is 50 PSI (3.5 kg/cm²) higher than formerly specified. Testing indicates the higher pressure provides a slight increase in usable oil volume and improved accumulator bladder service life.

We recommend a regular inspection of the accumulator gas charge to help ensure reliable winch operation. Check the gas charge after the first 250 hours of tractor operation, then every 1,000 hours or six (6) months whichever occurs first.

For winches built prior to S/N 8903954, we recommend the nitrogen charge pressure be checked and increased to 190-210 PSI (13.4 – 14.8 km/cm²). This may occur at the next available service interval.

NOTE: Model 60 PS winches mounted to tractors with engine driven PTO shafts (JD 750/850 & Komatsu D53/65/68/83) utilize only one (1) accumulator with a nitrogen charge pressure originally specified at 50 PSI (3.5 kg/cm²). For these applications, the nitrogen charge pressure should also be increased to 190-210 PSI (13.4 – 14.8 km/cm²).

Use the following procedure to check the accumulator pre-charge pressure:

1. Discharge the accumulator oil supply as defined above.
2. The (1) pint (30 in³) capacity accumulators used on winch Models 30, 60, 80 & 120 must be removed from the winch case to gain access to the gas charging valve. The (1) quart (60 in³) accumulators used on winch Models 50A & 70 may be charged still mounted in the winch case, but those used on the Model 50 winches must be removed.
3. Remove the service cap and make certain the valve core is properly installed and tightened to 3-4 lb•in (0.4 – 0.5 kg/m) torque.
4. Install the test/charge gauge assembly and check the nitrogen charge pressure.
Note: In order to properly service (1) pint (30 in³) capacity accumulators, a charging adapter (Greer Hydraulics P/N 603738) will be required.
5. If the gas charge is below 130 PSI (9.1 kg/cm²) the accumulator should be checked for leaks with a soap solution. Correct any leaks detected, or replace the accumulator as needed.
6. Charge the accumulator as defined above.

Also, at this time, it is advisable to check/adjust the hydraulic system relief pressure to the maximum specified pressure. Maintenance of proper system relief pressure is essential for reliable operation. Refer to the control valve service section of the winch service manual for relief pressure adjustment instructions.

⚠ CAUTION ⚠

Discharge existing accumulator oil supply before removing any hydraulic lines or performing any service to the winch. Personal injury may result from a sudden release of oil pressure. To discharge the accumulator, stop the tractor engine, slowly cycle the power shift control level into full HAUL-IN and PAY-OUT positions a minimum of five times.

⚠ WARNING ⚠

Hot oil may cause severe injury. Make certain the oil has cooled to a safe temperature (less than 110°F or 43°C) before servicing.